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(Additional Counsel on Signature Page)

Counsel for Genia Technologies, Inc.

**UNITED STATES DISTRICT COURT
 FOR THE NORTHERN DISTRICT OF CALIFORNIA**

THE REGENTS OF THE UNIVERSITY OF
 CALIFORNIA, a California corporation,

Plaintiff,

v.

ROGER JINTEH ARRIGO CHEN, an
 individual; GENIA TECHNOLOGIES, INC., a
 Delaware corporation; and DOES 1-25,

Defendants.

Case No. 3:16-CV-07396-EMC

**GENIA TECHNOLOGIES, INC.'S
 ANSWER TO PLAINTIFF'S
 FIRST AMENDED COMPLAINT
 AND COUNTERCLAIM**

DEMAND FOR JURY TRIAL

ANSWER

Defendant Genia Technologies, Inc. (“Genia”), by and through the undersigned counsel, answers Plaintiff’s First Amended Complaint as follows:

INTRODUCTION

1. Paragraph 1 contains conclusions of law to which no response is required. To the extent a response is required, Genia denies it has acted unlawfully and further denies that Roger Jinteh Arrigo Chen (“Mr. Chen”) violated his contractual obligations to UCSC. Genia further denies that it was founded upon technology rightfully belonging to UCSC. Genia admits that it was acquired by Roche Holdings AG (“Roche”) in 2014. Genia denies the remaining allegations in Paragraph 1.

2. Genia admits that Mr. Chen worked at UCSC from approximately October 2005 to January 2008 during the period while he was a graduate student at UCSC. The remaining allegations of Paragraph 2 assert legal conclusions and purport to characterize a document that speaks for itself, and thus no response is required. To the extent a response is required, Genia denies the remaining allegations in Paragraph 2.

3. Paragraph 3 calls for conclusions of law to which no response is required. To the extent a response is required, as to the first sentence, Genia is without knowledge as to whether individuals other than Mr. Chen have signed a Patent Agreement and admits that UCSC has filed patent applications with the United States Patent and Trademark Office (“USPTO”) purporting to identify Mr. Chen as a co-inventor of those patents. Genia denies the remaining allegations in Paragraph 3.

4. Paragraph 4 calls for conclusions of law to which no response is required. To the extent a response is required, Genia admits that Mr. Chen co-founded Genia and that Genia

describes itself as a “nanopore based sequencing company.” Genia denies the remaining allegations in Paragraph 4.

5. Paragraph 5 calls for conclusions of law to which no response is required. To the extent a response is required, as to the first sentence Genia denies that Mr. Chen violated the Patent Agreement. As to the second sentence, Genia admits that it holds a number of patents naming Mr. Chen as an inventor, but denies that any are directed to technology derived from Mr. Chen’s work at UCSC. Genia denies the remaining allegations in Paragraph 5.

6. Paragraph 6 calls for conclusions of law to which no response is required. To the extent a response is required, Genia admits that Mr. Chen has received compensation for his work at Genia. Genia denies the remaining allegations in Paragraph 6.

7. Paragraph 7 calls for conclusions of law to which no response is required. To the extent a response is required, Genia admits that it was acquired by Roche in 2014 for approximately \$125 million. Genia denies the remaining allegations in Paragraph 7.

JURISDICTION AND VENUE

8. Genia admits that this Court has jurisdiction over Plaintiff’s claims arising under Title 35 of the United States Code. Genia admits that, to the extent not preempted by federal law, this Court has supplemental jurisdiction over Plaintiff’s remaining claims pursuant to 28 U.S.C. § 1367.

9. Genia admits that venue is appropriate in this District.

INTRADISTRICT ASSIGNMENT

10. In light of the assignment of this case, and the ensuing proceedings before the Court, this allegation is moot.

THE PARTIES

11. Genia lacks knowledge and information and sufficient to form a belief as to the truth of the allegations in Paragraph 11, and therefore denies the same.

12. Admitted.

13. Admitted.

FACTUAL BACKGROUND

I. The Patent Agreement.

14. Admitted.

15. Upon information and belief, Genia admits the allegations in Paragraph 15, including that Mr. Chen fulfilled the requirements for receiving an M.S. degree by January 2008.

16. Upon information and belief, Genia admits that, while at UCSC, Mr. Chen was employed in the laboratory of Mark A. Akesson and David W. Deamer. Genia further admits that Mr. Chen signed the Patent Agreement, and denies the allegations characterizing Mr. Chen's obligation to sign it. As to the remaining allegations in Paragraph 16, the Patent Agreement speaks for itself and thus no response is required.

17. Paragraph 17 calls for conclusions of law to which no response is required. To the extent a response is required, the Patent Agreement speaks for itself.

18. Upon information and belief, Genia admits that Exhibit A is a true and correct copy of the Patent Agreement as signed by Mr. Chen on September 15, 2005.

19. Paragraph 19 calls for conclusions of law to which no response is required. To the extent a response is required, the Patent Agreement speaks for itself.

II. Scientific Inventions During Chen's Employment with the University.

20. Genia admits Mr. Chen conducted research at UCSC in the field of nanopore sequencing. Genia further admits that Paragraph 20 purports to characterize nanopore sequencing generally, but denies that such characterization is complete.

21. Paragraph 21 calls for conclusions of law to which no response is required. To the extent a response is required, Genia denies the allegations in Paragraph 21.

22. Paragraph 22 calls for conclusions of law to which no response is required. To the extent a response is required, Genia denies that the Record of Inventions memorialize the UCSC Inventions, as defined by the First Amended Complaint.

23. The Record of Invention No. 1 speaks for itself and therefore no response is required.

24. The Record of Invention No. 1 speaks for itself and therefore no response is required.

25. The Record of Invention No. 1 speaks for itself and therefore no response is required.

26. The Record of Invention No. 2 speaks for itself and therefore no response is required.

27. Upon information and belief, Genia admits that Akeson was a professor at UCSC while Mr. Chen was employed as a researcher at the University. Genia denies the remaining allegations in Paragraph 27.

28. The May 18, 2007 Invention Disclosure speaks for itself and therefore no response is required.

29. Upon information and belief, Genia admits that Deamer was a professor at UCSC while Mr. Chen was employed as a researcher at the University and further admits that Deamer was Mr. Chen's faculty advisor. Genia denies the remaining allegations in Paragraph 29.

30. Upon information and belief, Genia admits that Dunbar was an assistant professor at UCSC while Mr. Chen was employed at the University and further admits that Wilson was a graduate student employed as a researcher at UCSC while Mr. Chen was employed at the University. Genia denies the remaining allegations in Paragraph 30.

31. Upon information and belief, Genia admits that Mr. Chen co-authored a paper entitled "*Sequence-specific detection of individual DNA polymerase complexes on real time using a nanopore*," Nat. Nanotechnol. 2(11): 718-724 (Nov. 2007).

III. The University Seeks Patent Protection for the UCSC Inventions.

32. Paragraph 32 calls for conclusions of law for which no response is required. To the extent a response is required, Genia admits, upon information and belief, that Plaintiff has filed

1 the patent applications enumerated in the First Amended Complaint and that these patent
2 applications have purported to identify Mr. Chen as a co-inventor.

3 33. Paragraph 33 calls for conclusions of law to which no response is required. To the
4 extent a response is required, Genia lacks knowledge or information sufficient to form a belief
5 about the truth of the allegations in Paragraph 33, and therefore denies the same.

6 **IV. The Patent Rules Regarding Disclosure of Inventorship.**

7 34. Paragraph 34 calls for conclusions of law to which no response is required.

8 35. Paragraph 35 calls for conclusions of law to which no response is required. To the
9 extent a response is required, the requirements of 37 C.F.R. § 1.63 speak for themselves.

10 36. Paragraph 36 calls for conclusions of law to which no response is required. To the
11 extent a response is required, the requirements of 37 C.F.R. § 1.64 speak for themselves.

12 37. Paragraph 37 calls for conclusions of law to which no response is required. To the
13 extent a response is required, the requirements of 37 C.F.R. § 1.51 speak for themselves.

14 **V. The University's Early Efforts to Obtain Patent Protection for the UCSC**
15 **Inventions.**

16 38. Genia admits, upon information and belief, that between 2007 and 2008 the
17 University filed five patent applications listing Mr. Chen as an inventor, and that each of those
18 applications is now inactive. Genia further admits that the University subsequently filed one patent
19 application each in 2013, 2014, and 2015, and two patent applications in 2016, and that these patent
20 applications have purported to identify Mr. Chen as an inventor.

21 39. Upon information and belief, admitted.

22 40. Upon information and belief, admitted.

23 41. Genia admits that that the University contacted Mr. Chen in 2009 concerning the
24 University's U.S. Application Serial No. 12/080,684, and International Patent Application Serial
25 No. PCT/US2008/004467. Genia denies the remaining allegations in Paragraph 41.

26 42. Genia admits that the University asked Mr. Chen to sign declarations related to its
27 patent applications in 2009 and 2010. Genia denies that Mr. Chen was "evasive" in his responses
28

1 to the University and admits that at no time has Mr. Chen ever stated or indicated that he would
2 not abide by any obligations he may have under the Patent Agreement. Genia lacks knowledge or
3 information sufficient to form a belief as to the truth of the allegation that Mr. Chen spoke by
4 telephone with Matthew Kaser about signing a declaration, and there denies that allegation.

5 43. Upon information and belief, Genia admits that the University filed patent
6 applications as described in Paragraph 32 of the First Amended Complaint. Genia denies the
7 remaining allegations in Paragraph 43.

8 44. Genia admits that it was founded by Mr. Chen and others in March 2009. Genia
9 denies the remaining allegations in Paragraph 44.

10 **VI. Chen Evades the University's Requests to Execute Patent Assignments and**
11 **Declarations Relating to the University Patent Applications.**

12 45. Genia admits that U.S. Application Serial No. 14/056,636 was filed on October 17,
13 2013 and lists Mr. Chen, Akeson, Deamer, Dunbar, and Wilson as inventors.

14 46. The January 14, 2014 letter from the University to Mr. Chen speaks for itself and
15 therefore no response is required.

16 47. The January 22, 2014 letter from Mr. Chen to the University and the March 4, 2014
17 letter from the University to Mr. Chen speak for themselves and therefore require no response.

18 48. The March 5, 2014 letter from Mr. Chen to the University speaks for itself and
19 therefore no response is required.

20 49. Genia lacks knowledge or information sufficient to form a belief about the truth of
21 the allegations in the first sentence of Paragraph 49, and therefore denies the same. Upon
22 information and belief, Genia admits that Exhibit B is a true and correct copy of the University's
23 policy. The second sentence contains conclusions of law to which no response is required and,
24 further, the University's policy speaks for itself and therefore does not require a response. Genia
25 denies the remaining allegations in Paragraph 49.

26 50. Genia admits that the University filed U.S. Application Serial No. 14/300,453 on
27 June 10, 2014 and that the application contains claims copied from U.S. Patent No. 8,461,854,
28

1 assigned to Genia, but denies that Akeson, Deamer, Dunbar, and Wilson are true inventors of the
2 claimed subject matter. Genia further denies that the University did not learn of the Genia Patents
3 until 2014. The August 18, 2014 letter from the University to Mr. Chen speaks for itself and
4 therefore no response is required.

5 51. The September 5, 2014 letter speaks for itself and therefore no response is required.

6 52. The University's written response, dated September 30, 2014, speaks for itself. As
7 to the remaining allegations in Paragraph 52, Genia lacks knowledge or information sufficient to
8 form a belief as to the truth of the allegations, and therefore denies the same.

9 53. The February 25, 2016 and May 24, 2016 letters from Mr. Chen to the University
10 each speak for themselves and therefore require no response. Genia denies the remaining
11 allegations in Paragraph 53.

12 54. Upon information and belief, Genia admits that it has filed patent applications
13 related to nanopore technology in which Mr. Chen was listed as an inventor, beginning on February
14 8, 2010. Genia denies the remaining allegations in Paragraph 54.

15 55. Upon information and belief, admitted, since Mr. Chen did not invent the subject
16 matter claimed in those applications while he was at UCSC.

17 **VII. Chen Uses the UCSC Inventions to Found a New Company, Genia.**

18 56. Genia admits that it was founded in March 2009 by Mr. Chen and others, and is a
19 "nanopore based sequence company." Genia denies remaining allegations in Paragraph 56.

20 57. Genia admits that the University filed claims in at least University Application
21 Serial No. 14/300,453 that were copied from claims of Genia's U.S. Patent No. 8,461,854. Genia
22 denies the remaining allegations in Paragraph 57.

23 58. Genia denies the allegations in Paragraph 58.

24 59. Upon information and belief, Genia admits that Randy Davis was never employed
25 by or a student at UCSC and that he did not participate in any of the work at Akeson and Deamer's
26 laboratory at UCSC prior to Mr. Chen's departure in 2008. Genia denies the remaining allegations
27 in Paragraph 59.

60. To the extent Paragraph 60 purports to characterize the contents of the Patent Agreement, that document speaks for itself and no response is required. Genia denies the remaining allegations in Paragraph 60.

61. Genia denies the allegations in Paragraph 61.

VIII. Roche Pays More than \$125 Million to Acquire Genia.

62. Genia admits that Roche is a major healthcare company with a significant annual revenue and a large number of employees worldwide. Genia further admits that Roche agreed to acquire Genia in June 2014. The Press Release regarding the acquisition speaks for itself and therefore no response is required.

63. Genia admits that its intellectual property was part of the consideration in Roche's acquisition of Genia. Genia denies the remaining allegations in Paragraph 63.

64. Genia admits that Mr. Chen received compensation from Roche's acquisition of Genia. Genia denies the remaining allegations in Paragraph 64.

IX. Chen's Evasive Conduct Prevented the University from Discovering His Misconduct.

65. Paragraph 65 calls for conclusions of law to which no response is required. To the extent a response is required, the Patent Agreement speaks for itself. Genia denies the remaining allegations in Paragraph 65.

66. Paragraph 66 calls for conclusions of law to which no response is required. To the extent a response is required, Genia denies the allegations in Paragraph 66.

67. Paragraph 67 calls for conclusions of law to which no response is required. To the extent a response is required, Genia denies the allegations in Paragraph 67.

68. Genia admits that the '914 Patent was published on August 11, 2011 and issued on December 4, 2014. The remaining allegations of Paragraph 68 call for conclusions of law to which no response is required. To the extent a response is required, Genia denies the remaining allegations in Paragraph 68.

1 69. Genia admits that the '914 Patent was published on August 11, 2011 and that the
2 chart in Paragraph 69 accurately sets forth claim 1 as recited in the '914 Patent and U.S. Patent
3 App. No. 13/620,973. The remaining allegations in Paragraph 69 call for conclusions of law to
4 which no response is required.

5 70. Genia admits that the Genia Patent applications filed subsequent to the August 11,
6 2011 patent are continuation applications that recite additional claims to the same invention
7 disclosed in U.S. Patent No. 8,324,914. Genia denies the remaining allegations in Paragraph 70.

8 71. Genia denies the allegation in the first sentence of Paragraph 71. Genia admits that
9 U.S. Patent App. No. 12/658,604 published on August 11, 2011; that U.S. Patent App. No.
10 13/620,973 published on January 17, 2013; that U.S. Patent App. No. 13/893,142 published on
11 January 16, 2014; that U.S. Patent App. No. 14/513,642 published on April 2, 2015; and that U.S.
12 Patent App. No. 15/079,322 published on November 24, 2016. Genia denies that it kept the pursuit
13 of these patent applications "secret at all times." Genia lacks knowledge or information sufficient
14 to form a belief as to the remaining allegations in Paragraph 71, and therefore denies the same.

15 72. Genia denies that Mr. Chen's conduct induced the University into forbearing suit
16 and further denies that Mr. Chen misled the University with respect to his obligations, if any, under
17 the Patent Agreement. To the extent Paragraph 72 purports to summarize communications
18 between Mr. Chen and the University, those communications speak for themselves and therefore
19 require no response. Genia denies all remaining allegations in Paragraph 72.

20 73. Paragraph 73 calls for conclusions of law to which no response is required. To the
21 extent a response is required, Genia denies the allegations in Paragraph 73.

22 74. Paragraph 74 calls for conclusions of law to which no response is required. To the
23 extent a response is required, Genia denies the allegations in Paragraph 74.
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CLAIMS FOR RELIEF

First Claim for Relief

Correction of Inventorship Under 35 U.S.C. § 256

(Against Chen and Genia)

75. Genia repeats and incorporates its answers to Paragraphs 1 through 74 above, as if set forth fully herein.

76. Upon information and belief, admitted to the extent the “UCSC Inventions” purport to encompass inventions made by Mr. Chen while at Genia and further admitted to the extent that Mr. Chen did not invent the claimed subject matter set forth in the UCSC Inventions while he was at UCSC.

77. Paragraph 77 calls for conclusions of law to which no response is required. To the extent a response is required, Genia denies the allegations in Paragraph 77.

78. Genia denies the allegations in Paragraph 78.

79. Genia admits that the Genia Patents identify Mr. Davis as a co-inventor, and that, on information and belief, Mr. Davis did not work at the University during the time period in which Mr. Chen worked for the University, and that he has never worked for the University. Genia denies the remaining allegations in Paragraph 79.

80. Genia denies the allegations in Paragraph 80.

81. Genia denies the allegations in Paragraph 81.

82. Genia denies the allegations in Paragraph 82.

83. Genia denies the allegations in Paragraph 83.

84. Genia denies the allegations in Paragraph 84.

85. Genia denies the allegations in Paragraph 85.

86. Genia admits that Mr. Chen is one of the true inventors of the Genia Patents. Genia denies the remaining allegations in Paragraph 86.

87. Genia admits that the University is seeking relief pursuant to 28 U.S.C. § 2201 and 35 U.S.C. § 256. Genia denies that the University is entitled to any such relief.

Second Claim for Relief

Declaration of Patent Ownership

(Against Chen and Genia)

88. Genia repeats and incorporates its answers to Paragraphs 1 through 87 above, as if set forth fully herein.

89. Genia admits that after leaving the University and co-founding Genia, Mr. Chen filed patent applications that were assigned to Genia. Genia denies the remaining allegations in Paragraph 89.

90. Genia admits that the patents and patent applications referenced in Paragraph 90 are assigned to Genia.

91. Genia denies the allegations in Paragraph 91.

92. Admitted.

93. Genia denies the allegations in Paragraph 93.

Third Claim for Relief

Breach of Contract

(Against Chen)

94. Genia repeats and incorporates its answers to Paragraphs 1 through 93 above, as if set forth fully herein.

95. Paragraph 95 calls for a conclusion of law to which no response is required. To the extent a response is required, Genia admits, upon information and belief, that Mr. Chen signed the Patent Agreement on September 15, 2005. Genia denies that execution of the Patent Agreement was a condition of his employment at the University.

96. Paragraph 96 calls for conclusions of law to which no response is required. To the extent a response is required, the Patent Agreement speaks for itself.

97. Paragraph 97 calls for conclusions of law to which no response is required. To the extent a response is required, Genia lacks knowledge or information sufficient to form a belief as to the truth of the allegations in Paragraph 97, and therefore denies the same.

112. Genia denies the allegation in Paragraph 112.

Fifth Claim for Relief

Conversion

(Against Chen and Genia)

113. Genia repeats and incorporates its answers to Paragraphs 1 through 112 above, as if set forth fully herein.

114. Paragraph 114 calls for conclusions of law to which no response is required. To the extent a response is required, Genia denies the allegations in Paragraphs 114.

115. Genia denies the allegations in Paragraph 115.

116. Genia denies the allegations in Paragraph 116.

117. Genia denies the allegations in Paragraph 117.

118.

119. Genia admits that Mr. Chen is one of the co-founders of Genia. Genia denies the remaining allegations in Paragraph 118.

120. Genia denies the allegation in Paragraph 119.

121. Genia denies the allegations in Paragraph 120.

122. Genia denies the allegation in Paragraph 121.

Sixth Claim for Relief

Inducing Breach of Contract

(Against Genia)

123. Genia repeats and incorporates its answers to Paragraphs 1 through 121 above, as if set forth fully herein.

124. Paragraph 123 calls for a conclusion of law to which no response is required. To the extent a response is required, Genia admits, upon information and belief, that Mr. Chen signed the Patent Agreement on September 15, 2005. Genia denies that execution of the Patent Agreement was a condition of his employment at the University.

1 125. Paragraph 124 calls for conclusions of law to which no response is required. To
2 the extent a response is required, the Patent Agreement speaks for itself.

3 126. Paragraph 125 calls for conclusions of law to which no response is required. To
4 the extent a response is required, Genia lacks knowledge or information sufficient to form a belief
5 as to the truth of the allegations in Paragraph 125, and therefore denies the same.

6 127. Genia admits that Mr. Chen is a co-founder of Genia. Genia denies the remaining
7 allegations in Paragraph 126.

8 128. Genia denies the allegations in Paragraph 127.

9 129. Genia denies the allegation in Paragraph 128.

10 130. Genia denies the allegations in Paragraph 129.

11 131. Genia denies the allegations in Paragraph 130.

12 132. Genia denies the allegations in Paragraph 131.

13 **Seventh Claim for Relief**

14 **Intentional Interference with Contractual Relations**

15 **(Against Genia)**

16 133. Genia repeats and incorporates its answers to Paragraphs 1 through 131 above, as
17 if set forth fully herein.

18 134. Paragraph 133 calls for a conclusion of law to which no response is required. To
19 the extent a response is required, Genia admits, upon information and belief, that Mr. Chen signed
20 the Patent Agreement on September 15, 2005. Genia denies that execution of the Patent
21 Agreement was a condition of his employment at the University.

22 135. Paragraph 134 calls for conclusions of law to which no response is required. To
23 the extent a response is required, the Patent Agreement speaks for itself.

24 136. Paragraph 135 calls for conclusions of law to which no response is required. To
25 the extent a response is required, Genia lacks knowledge or information sufficient to form a belief
26 as to the truth of the allegations in Paragraph 135, and therefore denies the same.
27
28

1 137. Genia admits that Chen is a co-founder of Genia. Genia denies the remaining
2 allegations in Paragraph 136.

3 138. Genia denies the allegations in Paragraph 137.

4 139. Genia denies the allegation in Paragraph 138.

5 140. Genia denies the allegations in Paragraph 139.

6 141. Genia denies the allegations in Paragraph 140.

7 142. Genia denies the allegations in Paragraph 141.

8 **Eighth Claim for Relief**

9 **Constructive Trust**

10 **(Against Chen and Genia)**

11 143. Genia repeats and incorporates its answers to Paragraphs 1 through 141 above, as
12 if set forth fully herein.

13 144. Genia denies the allegations in Paragraph 143.

14 145. Genia denies the allegations in Paragraph 144.

15 146. Genia denies the allegations in Paragraph 145.

16 147. Genia admits that Roche agreed to pay Genia's shareholders \$125 million in cash,
17 plus \$225 million in contingent payments. Genia further admits that its intellectual property was
18 part of the consideration in Roche's acquisition of Genia. Genia denies the remaining allegations
19 in Paragraph 146.

20 148. Genia denies the allegations in Paragraph 147.

21 149. Genia denies the allegations in Paragraph 148.

22 150. Genia denies the allegations in Paragraph 149.

1 **RESPONSE TO PLAINTIFF'S DEMAND FOR JURY TRIAL**

2 Pursuant to Rule 38 of the Federal Rules of Civil Procedure, Genia hereby demands a jury
3 for all issues so triable.

4 **RESPONSE TO PLAINTIFF'S REQUEST FOR RELIEF**

5 Genia denies that it is liable for any relief requested in the Request for Relief, including
6 that requested in subparagraphs 1 through 12. The inventorship of the '914, '854, '420, and '437
7 Patents correctly reflect the true inventors. Genia has never appropriated any invention created by
8 Mr. Chen while at the University and therefore the University has no right to be declared the true
9 and lawful owner of the Genia Patents. Nor is the University entitled to recover statutory damages,
10 compensatory damages, accounting, injunctive relief, costs, fees, interest, or any other type of
11 recovery from Genia. The University's request should therefore be denied in its entirety and with
12 prejudice. Genia asks that judgment on the University's claims be entered for Defendants.

13 **AFFIRMATIVE DEFENSES**

14 Genia alleges and asserts the following defenses in response to the allegations and each
15 claim for relief, undertaking the burden of proof only as to those defenses deemed affirmative
16 defenses by law, regardless of how such defenses are denominated herein. Genia specifically
17 reserves all rights to allege additional affirmative defenses that become known through the course
18 of discovery.

19 **FIRST AFFIRMATIVE DEFENSE**

20 **(Failure to State a Claim for Relief)**

21 1. The First Amended Complaint fails to state a claim upon which relief can be granted.

22 **SECOND AFFIRMATIVE DEFENSE**

23 **(Statutes of Limitations)**

24 2. Claims II-VIII are barred by the applicable statutes of limitation. The operative events
25 underlying each of these claims occurred well before December 29, 2012, and therefore accrued
26 in advance of the earliest accrual date permitted by the statutes of limitation governing each of
27 these claims.

THIRD AFFIRMATIVE DEFENSE

(Preemption)

3. Claims II-VIII are barred by federal preemption because each of these claims turns upon a determination of the proper inventorship of the Genia Patents, a determination exclusive to federal law.

FOURTH AFFIRMATIVE DEFENSE

(Laches and Equitable Estoppel)

4. Each claim is barred by the doctrines of laches and/or equitable estoppel because Plaintiff, through its conduct, made representations to Genia that Genia in turn relied upon. Plaintiff, by bringing this untimely suit, has changed its representations to Genia's detriment.

FIFTH AFFIRMATIVE DEFENSE

(Presumption of Correct Inventorship)

5. The issuance of the Genia Patents creates a presumption that the named inventors are the true and only inventors of the claims disclosed in those patents. Plaintiff will not be able to produce evidence sufficient to overcome this presumption.

SIXTH AFFIRMATIVE DEFENSE

(Waiver, Acquiescence, and Ratification)

6. Each claim for relief alleged is barred, in whole or in part, by the doctrines of waiver, acquiesce and ratification, supported by at least Plaintiff's tardiness in bringing this action and asserting any rights to the Genia Patents.

SEVENTH AFFIRMATIVE DEFENSE

(Unclean Hands)

7. Each cause of action alleged is barred, in whole or in part, by the equitable doctrine of unclean hands. Plaintiff has acted in bad faith through the conspicuous timing for the filing of this lawsuit, and therefore is not entitled to relief.

EIGHTH AFFIRMATIVE DEFENSE**(Failure to Mitigate)**

8. If Plaintiff has suffered any damages by reason of any acts, omissions, or courses of conduct on the part of Genia, all or part of the damages were caused by or are attributable to the failure of the University to act reasonably or prudently to mitigate its damages. For example, Plaintiff failed to diligently pursue patent prosecution in this case.

NINTH AFFIRMATIVE DEFENSE**(No Breach of Contract)**

9. Claims II-VIII are barred in whole or in part because Mr. Chen met all of his contractual and legal duties under the Patent Agreement, and both Mr. Chen and Genia did not breach any duties, if any, owed to UCSC.

TENTH AFFIRMATIVE DEFENSE**(Failure to Join)**

10. The University has failed to name or join an indispensable party or parties to the present action, including but not limited to Oxford Nanopore Technologies Limited and any other persons or entities that may have an ownership interest in the UCSC Patents, as defined in the First Amended Complaint. Oxford Nanopore Technologies Limited is, upon information and belief, the exclusive licensee of the UCSC Patents and, in effect, the assignee of the UCSC Patents. Accordingly, considerations of finality, judicial economy, and fairness require that it be brought into the litigation.

COUNTERCLAIM

Counterclaim Plaintiff Genia Technologies, Inc. ("Genia") alleges as follows:

PARTIES

1. This is a counterclaim for a declaration of inventorship on U.S. Patent Nos. 8,324,914 ("914 Patent"), 8,461,854 ("854 Patent"), 9,041,420 ("420 Patent"), 9,377,437 ("437 Patent"), 15/079,322 ("322 Application") (collectively the "Genia Patents").

1 potential is applied. The theory is that changes in the voltage will indicate each individual
2 nucleotide in a DNA or RNA strand as the strand passes near or through the nanopore.

3 10. Mr. Chen, working with Genia co-founder Randy Davis, realized that there were
4 numerous challenges with nanopore technology to make a commercially viable product – i.e., a
5 product that provided an array of nanopores to reliably read multiple sequences at one time. And
6 in considering these challenges, Messrs. Chen and Davis came up with a number of novel solutions.

7 11. For example, one problem was how to design simplified circuitry for the array so
8 that the array can be compact, scalable, and commercially feasible to manufacture. Mr. Chen,
9 working with Mr. Davis, conceived of a chip comprising a plurality of individually addressable
10 nanopores, and further conceived that each individually addressable nanopore device is addressable
11 using row and column addressing.

12 12. Another problem was how to determine whether, in the context of such individually
13 addressable nanopore array, a membrane has formed on the circuit. Messrs. Chen and Davis
14 conceived of forming a membrane adjacent to an electrode, and then measuring the capacitance
15 and/or resistance to determine whether the membrane has in fact formed. If a membrane formed,
16 a nanopore would then be inserted.

17 13. Another problem involved how to control the progression of a molecule through the
18 nanopore in this array of individually addressable nanopores. To address this issue and as described
19 in the Genia Patents, Messrs. Chen and Davis conceived of trapping a portion of the molecule in
20 the nanopore, applying a variable voltage across the nanopore until the trapped portion of molecule
21 is moved within the nanopore, and then characterizing the molecule based on the electrical stimulus
22 required to affect movement of at least a portion of the trapped portion of the molecule within the
23 nanopore.

24 14. These inventions made by Messrs. Chen and Davis are described and claimed in a
25 number of U.S. Patents and Patent Application filed by Genia and listing Mr. Chen and Genia
26 employee Randy Davis as co-inventors. These patents and patent application, collectively referred
27 to as the “Genia Patents,” include:
28

Genia's Patent Applications and Issued Patents						
Filing Date	U.S. Patent App. Serial No.	Pre-Grant Publication Date	Issue Date	U.S. Patent No.	Description of Invention	Inventors
February 8, 2010	12/658,604	August 11, 2011 ¹	December 4, 2012	8,324,914	"Systems and methods for characterizing a molecule"	Roger Jinteh Arrigo Chen, Randy Davis
September 15, 2012	13/620,973	January 17, 2013 ²	June 11, 2013	8,461,854	"Systems and methods for characterizing a molecule"	Roger Jinteh Arrigo Chen, Randy Davis
May 13, 2013	13/893,142	January 16, 2014 ³	May 26, 2015	9,041,420	"Systems and methods for characterizing a molecule"	Roger Jinteh Arrigo Chen, Randy Davis
October 14, 2014	14/513,642	April 2, 2015 ⁴	June 28, 2016	9,377,437	"Systems and methods for characterizing a molecule"	Roger Jinteh Arrigo Chen, Randy Davis
March 24, 2016	15/079,322 ("Genia '322 Application")	November 24, 2016 ⁵	n/a	n/a	"Systems and methods for characterizing a molecule"	Roger Jinteh Arrigo Chen, Randy Davis

15. Each of the Genia Patents shares a common specification. As a result, all of the inventions claimed in the Genia Patents were described in the first Genia Patent No. 8,324,914, which was filed on February 8, 2010, published on August 11, 2011, and issued on December 4, 2012.

16. Although Mr. Chen had been previously exposed to nanopore sequencing while he was a graduate student and researcher at the University of California Santa Cruz ("University" or

¹ U.S. Patent App. Serial No. 12/658,604 published as U.S. Patent App. Publ. No. 2011/0193570.
² U.S. Patent App. Serial No. 13/620,973 published as U.S. Patent App. Publ. No. 2013/0015068.
³ U.S. Patent App. Serial No. 13/893,142 published as U.S. Patent App. Publ. No. 2014/0014513.
⁴ U.S. Patent App. Serial No. 14/513,642 published as U.S. Patent App. Publ. No. 2015/0094214.
⁵ U.S. Patent App. Serial No. 15/079,322 published as U.S. Patent App. Publ. No. 2016/0340719.

1 “UCSC”) from May 2005 through January 2008, he did make any of the inventions described in
2 the Genia Patents while at UCSC.

3 17. Rather, while at UCSC, Mr. Chen worked in the laboratory of Mark Akeson,
4 focusing his research on single nanopores, not arrays.

5 18. Mr. Chen also disclosed to UCSC an idea for a nanopore array, but that array differs
6 significantly from the one he conceived of at Genia. In particular, Mr. Chen provided UCSC a
7 Disclosure and Record of Invention entitled “Method for Manufacture of Very Large Scale Arrays
8 of Independently Addressable Nanopores” (“Chen ROI No. 1”). In contrast to the array described
9 and claimed in the Genia Patents, Chen ROI No. 1 discloses a chip in which each nanopore has a
10 finite state machine and a shift register. It was not until his work at Genia that Mr. Chen realized
11 that the chip in Chen ROI No. 1 was too costly, complex, and not scalable.

12 **First Claim for Relief**

13 **Declaration of Patent Ownership**

14 19. Genia repeats and realleges the allegations set forth in Paragraphs 1 through 18 of
15 its Counterclaim above, as if set forth fully herein.

16 20. The true inventors of the subject matter disclosed in the Genia Patents—Roger Chen
17 and Randy Davis—are currently disclosed on the Genia Patents.

18 21. In light of the University’s First Amended Complaint, there exists an actual
19 controversy between Genia and the University regarding the ownership of the Genia Patents.

20 22. Accordingly, a valid and justiciable controversy has arisen and exists between the
21 University and Genia with respect to the ownership of the Genia Patents. Genia desires a judicial
22 determination and declaration of the respective rights and duties of the parties herein. Such a
23 determination is necessary and appropriate at this time so that the parties may ascertain their
24 respective rights and duties.

25 23. Genia is entitled to a declaratory judgment that it is the true and correct owner of
26 the Genia Patents.

DEMAND FOR JURY TRIAL

Genia demands a trial by jury as to all issues so triable.

PRAYER FOR RELIEF

WHEREFORE, Genia respectfully requests that the Court enter judgment in its favor and against the University as follows:

1. Declare that Genia is the true and rightful owner of the Genia Patents;
2. Award Genia its costs and expenses incurred defending this case, along with interest; and
3. Award Genia such other and further relief as the Court deems just and proper.

DATE: September 15, 2017

**WILMER CUTLER PICKERING
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